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NEWS

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U.S. - SOVIET AGREEMENT

The text of an agreement, attached, between the National Aeronautics and Space Administration and the Academy of Sciences of the USSR which was announced on October 29, has now been confirmed by an exchange of notes between Dr. George M. Low, Acting Administrator of NASA, and Academician M. V. Keldysh, President of the Soviet Academy. The agreement sets forth procedures and a schedule for joint efforts to design compatible docking and rendezvous arrangements.

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SUMMARY OF RESULTS

Preliminary Technical Talks Between Representatives of the USSR Academy of Sciences and the US National Aeronautics and Space Administration on the Question of Providing for Compatibility of Rendezvous and Docking Systems of Manned Spacecraft and Space Stations.

I. In accordance with an earlier understanding between the leadership of the USSR Academy of Sciences and the US National Aeronautics and Space Administration, preliminary technical talks were held in Moscow, October 26-28, 1970, in which problems of providing for compatibility of rendezvous and docking systems of manned spacecraft and space stations were discussed.

As a result of the exchange of views and information on existing rendezvous and docking systems, the parties outlined a possible approach to providing for compatible systems.

II. It was recognized that the following questions merit further study:

1. Passive reflectors of the radio guidance systems, their location and characteristics.

2. Passive reflectors of the optical guidance system, their location and characteristics.

3. The radio-technical guidance equipment, utilizing active radio signal transmission and return, including its elements, location and characteristics.

4. Lighting equipment for rendezvous and docking, its elements, relative location and characteristics.

5. Benchmarks and reference marks for orientation during rendezvous and docking, their location and characteristics.

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6. Coordinate systems for reference in developing rendezvous and docking techniques for spacecraft and space stations.

7. The docking assembly, inner tunnel and electrical, pneumatic and hydraulic couplings.

8. Pneumatic, hydraulic and electrical couplings and connectors between space suits and on-board equipment of the spacecraft or stations and their characteristics, the dimensions of hatches and the means of opening them from the outside (in the event that assistance needs to be rendered from the outside).

9. Composition and characteristics of the cabin atmosphere.

10. Voice and code communications between spacecraft.

11. Dynamics of docking and the stabilization of system after docking.

12. Constraints on the location of thrusters, solar batteries and other design elements which should be borne in mind to assure the possibility of docking.

III. The parties have agreed on the following procedure for further work:

1. To conduct, by correspondence, during the month of November 1970, a mutual exchange of technical materials on radio guidance and rendezvous systems, on the composition and characteristics of spacecraft atmospheres, and on systems of voice communications.

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2. Each side will prepare its own draft of technical requirements for systems for which it considers it advisable to assure compatibility and, in January-February, 1971, will send these documents to the other side for preliminary familiarization.

3. In March-April, 1971, a meeting of working groups will be held for the purpose of refining further the lists of systems for which it is desirable to provide compatibility, and to discuss these technical requirements with the goal of recommending common requirements. However, if the parties consider it necessary, they may choose to hold a prior meeting between the responsible representatives of the USSR Academy of Sciences and the U.S. NASA for the purpose of discussing the draft technical requirements in a preliminary manner.

4. After agreement on the technical requirements each side will independently work out preliminary systems designs.

5. After development of the designs, the representatives of the USSR Academy of Sciences and the U.S. NASA will consider them and determine what further work is necessary to assure compatibility.

IV. For the conduct of the meeting in March-April, 1971, the parties consider it advisable to form three working groups:

WG 1 - Working Group to assure the compatibility of overall methods and means for rendezvous and docking. (Charged with the task of specifying systems for which compatibility should be assured, the selection of rendezvous methods, the consideration of items 6, 8, 9, 12 and, in part, items 1, 2, 3,

4, 5, of Section II as they concern the location of rendezvous and docking systems elements, and such other questions as are not included in the tasks of the other two Working Groups.)

WG 2 - Working Group to insure compatibility of radio guidance systems, optical and other guidance systems and communications. (Charged with consideration of items 1, 2, 3, 4, 5 and 10 of Section II.)

WG 3 - Working Group to assure compatibility of docking assembly and tunnel. (Charged with consideration of items 7 and 11 and, in part, items 5, 8 and 12 of Section II.)

The parties have agreed that the numerical composition, the place of meeting of the Working Groups, as well as specific dates for the meetings of the Working Groups, will be agreed upon subsequently by correspondence. The Working Group meetings will be conducted alternately in the two countries.

It is understood that rendezvous and docking are considered here only for occasions on which there is mutual agreement for such activities.

V. This Summary of Results shall enter into force after its affirmation by the President of the USSR Academy of Sciences and the Administrator of the National Aeronautics and Space Administration, and the parties shall inform each other of such affirmation by mail.

Done in Moscow, October 28, 1970 in duplicate, in the English and Russian languages.

For the USSR:

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